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| 10/576,193  | 04/17/2006  | Tsukasa Fujieda      | 060321              | 8608             |
| 23850 7590 09/29/2011<br>KRATZ, QUINTOS & HANSON, LLP<br>1420 K Street, N.W.<br>4th Floor<br>WASHINGTON, DC 20005 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| WALTERS JR, ROBERT S  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/576,193

**Applicant(s)**

FUJIEDA, TSUKASA

**Examiner**

ROBERT S. WALTERS JR

**Art Unit**

1717

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 5) ☒ Claim(s) 1,9,10 and 18 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,9,10 and 18 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-893)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Status of Application***

Claims 1, 9, 10 and 18 are pending and presented for examination.

### ***Response to Arguments***

Applicant's arguments filed 6/28/2011 have been fully considered but they are not persuasive.

First, the applicant argues that the amendment clarifies the term "substrate" and overcomes the art of record. However, the examiner maintains that Tomioka teaches the newly claimed "substrate", as Tomioka teaches the substrate being an automobile body part (column 3, lines 15-16), where the body part has an undercoat, an intermediate coat, and a colored base coat (column 3, lines 43-57 and Figure 5, note that element 2 is an undercoat, element 3 is an intermediate coat, and element 4a is a colored base coat).

Second, the applicant argues that the evidence of unexpected results presented in Declarations I-III is commensurate in scope with the claims. However, the claims still broadly recite any water-soluble or water-dispersible, crosslinkable functional group-containing resin, and any crosslinking agent and any flaky luster pigment having the recited dimensions. The Declarations may provide unexpected results for the specific combinations of resins and crosslinking agents as are disclosed, but still can not be used to suggest that the parameters of the claims will provide similar unexpected results for any imaginable combination of resin,

crosslinking and flaky luster pigment as is presently claimed. Therefore, the examiner maintains that the evidence provided is not commensurate in scope to the claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1, 9, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomioka (U.S. Pat. No. 5079030) in view of Takashi et al. (JP Pub. No. 2001-149857) and Carpenter (U.S. Pat. No. 5320673) and Noritake et al. (JP 2003-117481) and Yoshioka et al. (U.S. PG PUB No. 2002/0007769).

Regarding claims 1, 9, 10 and 18, Tomioka teaches a method of forming a luster coating film (see abstract) comprising the steps of:

(1) applying an aqueous luster base coating composition to a substrate, wherein the substrate is a automobile body part (column 3, lines 15-16), where the body part has an undercoat, an intermediate coat, and a colored base coat (column 3, lines 43-57 and Figure 5, note that element 2 is an undercoat, element 3 is an intermediate coat, and element 4a is a colored base coat), in two to five stages, such that the thickness of the base coating applied in each stage is between 0.3 to 5  $\mu\text{m}$  when cured (this is accomplished by using only an air spray to deposit each stage, see column 4, lines 19-32);

(2) applying a clear coating composition over the uncured or heat-cured coating layer of the base coating composition (column 4, lines 38-40);

(3) heating the two-layer coating comprising the base coating composition and the clear coat to obtain a cured two-layer coating film (column 4, lines 40-45).

Tomioka further teaches allowing the luster base coat to stand or preheating the coating to about 50 to about 80 °C (column 3, lines 50-62 and column 4, lines 3-7) after each stage. Tomioka further teaches the substrate that is being coated is an automotive body (abstract) and also therefore teaches an automotive body having a luster coating film formed by the method (abstract).

Tomioka however fails to explicitly teach the base coatings and clear coatings being thermosetting coatings comprising the components as claimed, the thermosetting base coatings having a solids content of 5-15%, or having a solids content of at least 40% one minute after the application in each stage, and the additional step of applying a second clear coat layer directly on top of the previous clear coat layer. Tomioka further fails to teach applying an identical second set of base and clear coatings to provide at least a four-layer coating.

Takashi teaches forming a luster coating by forming a first metallic coating followed by a clear coat and then further applying a second metallic coating and a second clear coat layer followed by curing of the 4-layer coating (abstract). Takashi further teaches that the second metallic coating thickness should be only 5- 13 microns as it should be no more than a concealing film thickness. Takashi also teaches that the aqueous luster thermosetting base coating compositions have a solids content of 14 weight % (0033 and 0035).

Carpenter teaches a method of forming a luster coating using an aqueous luster base coat and a clear coat (column 16, lines 54-68). Carpenter teaches that both these coatings may be thermosetting compositions (column 16, lines 65-66) and that preferably the clear coat is applied in two layers (column 16, lines 60-63). Carpenter further teaches an aqueous (column 14, lines 52-56) luster thermosetting base coat composition comprising a water soluble or dispersible crosslinkable functional group-containing resin (column 14, lines 63-68), a crosslinking agent (column 15, lines 3-7), and a flaky luster pigment (column 13, lines 45-47 and column 14, lines 40-42) having a mean particle diameter as claimed (column 13, lines 48-51) which has been surface modified.

Noritake teaches the importance of drying (by standing or heating, see 0019) an aqueous thermosetting base coating composition prior to applying any aqueous metallic pigment compositions thereon to a solids content of greater than 40 % (see abstract, 0008 and 0019).

Finally, Yoshioka teaches using flaky luster pigment in metallic coatings (abstract), wherein the flaky luster pigment has particle diameter of from 2 to 50 microns, with a thickness of about 0.1 to 5 microns (0027).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tomioka's method by adding an additional base coat and clear coat layer as a concealing layer, wherein the base coating compositions contain from 14 % solids content, according to Takashi as well as utilizing the base coating compositions and optionally adding an additional final clear coat layer, as disclosed by Carpenter to form either a 4 or 5-layer coating. Regarding the additional base coat layer, as this layer is expected to serve as a concealing layer, it would also have been obvious to one of ordinary skill in the art at the time of the invention to deposit this second base layer to a thickness of 0.3 to 5 microns in each stage similarly to depositing the first base coating layer in Tomioka's method. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention to ensure that the solids content of the base coating compositions one minute after application in each stage is at least 40 weight %, as is taught by Noritake. Finally, it would have been obvious to one of ordinary skill in the art at the time of the invention to select a flaky luster pigment having the dimensions as disclosed by Yoshioka.

First, one would have been motivated to modify Tomioka's method by adding the second base coat in the claimed thickness and the second clear coat as disclosed by Takashi, as Takashi teaches that these steps allow for the coating to be free from metal unevenness and provides an excellent flip-flop property (abstract). Second, one would have been motivated to utilize the compositions and methods disclosed by Carpenter as he teaches that his method provides coatings having an excellent appearance and physical properties (column 16, lines 66-68), and that the metallic flakes described are resistant to oxidation with minimal discoloration or diminution of the metallic effect, and provide superior dispersion in the waterborne composition

and thus result in a coating with an enhanced metallic effect and improved color development (column 2, lines 31-43). Third, one would have been motivated to modify Tomioka's method by ensuring that the base coatings had a solids content of greater than 40 % after each stage, as Noritake teaches that this results in the metallic coating film having excellent orientation of the metallic pigment, as well as an excellent flip-flop property. Finally, one would have been motivated to modify Tomioka's method by using a flaky luster pigment having the dimensions disclosed by Yoshioka as Yoshioka teaches that pigments having these dimensions provide an excellent luster feeling (0027).

### ***Conclusion***

Claims 1, 9, 10 and 18 are pending.

Claims 1, 9, 10 and 18 are rejected.

No claim is allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Thursday, 9:00am to 7:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571)272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT S WALTERS JR/  
September 24, 2011  
Examiner, Art Unit 1717

/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 1717